

WHAT IS CLAIMED IS:

1. A disk loading apparatus for a disk drive, comprising:
a main body; and
a tray including a disk-seating portion configured to be rotated inside and outside the main body about a center of rotation located at one side of the main body.
2. The disk loading apparatus as claimed in claim 1, further comprising a drive unit configured to rotate the tray.
3. The disk loading apparatus as claimed in claim 2, wherein the drive unit comprises:
a driving motor configured to be mounted on a main base and rotate in a forward or reverse direction; and
a power transmission unit configured to transmit driving force from the driving motor to the tray.
4. The disk loading apparatus as claimed in claim 3, wherein the power transmission unit comprises at least one gear.
5. The disk loading apparatus as claimed in claim 4, further comprising a rack gear having a predetermined radius of curvature formed on a bottom surface of the tray and configured to engage with the driving gear of the power transmission unit.

6. The disk loading apparatus as claimed in claim 1, wherein the center of rotation of the tray is located at a front end of the main body.

7. The disk loading apparatus as claimed in claim 6, wherein the tray is in the form of a sector of which a center point acts as the center of rotation of the tray.

8. The disk loading apparatus as claimed in claim 1, wherein a predetermined gap is formed between the tray and the main body on a side of the tray on which the center of rotation is located.

9. The disk loading apparatus as claimed in claim 1, further comprising:
a disk guide unit provided on the tray and the main body and configured to cause a disk to be loaded and unloaded according to a rotating motion of the tray.

10. The disk loading apparatus as claimed in claim 9, wherein the center of rotation of the tray is located at a front end of the main body.

11. The disk loading apparatus as claimed in claim 9, wherein the disk guide unit comprises:
a leading end guide formed to extend along a leading end of the tray;

a trailing end guide formed to extend at a predetermined angle with respect to a side edge of the tray; and

first and second side guides formed on both sides of the main body.

12. The disk loading apparatus as claimed in claim 11, wherein the first side guide comprises a slant portion configured to facilitate entrance of the disk into the disk drive formed at a front end thereof.

13. The disk loading apparatus as claimed in claim 10, further comprising an interference prevention portion configured to prevent interference of the leading end of the tray with and provided at the front end of the main body adjacent the center of rotation of the tray.

14. The disk loading apparatus as claimed in claim 9, wherein the disk guide unit comprises:

leading and trailing end guides formed to face each other at leading and trailing ends of the tray, respectively;

first and second side guides formed on both sides of the main body; and

a guide slot formed in a door provided at the leading end of the tray and configured to allow the disk to protrude outside the tray.

15. The disk loading apparatus as claimed in claim 14, wherein the first side guide comprises a slant portion configured to facilitate entrance of the disk into the disk drive formed at a front end thereof.

16. The disk loading apparatus as claimed in claim 14, wherein the disk-seating portion is formed such that all portions except the guides are flat up to edges of the tray.

17. The disk loading apparatus as claimed in claim 14, wherein the second side guide is configured to protrude from one side of the main body toward the first side guide by a predetermined distance.

18. A disk drive comprising the disk loading apparatus of claim 1.

19. A disk loading apparatus for a disk drive, comprising:

a main body; and

a tray rotatably coupled to a shaft formed on a corner of the main body so that the tray is horizontally rotatable about the shaft in a plane parallel to a top surface of the main body.

20. The disk loading apparatus as claimed in claim 19, further comprising a drive unit configured to rotate the tray.

21. The disk loading apparatus as claimed in claim 20, wherein the drive unit comprises:

a driving source provided on one side of the main body; and

a power transmission unit configured to transmit power from the driving source to rotate the tray.

22. The disk loading apparatus as claimed in claim 21, further comprising a rack having a predetermined radius of curvature formed on a bottom surface of the tray and engaged with a driving gear of the power transmission unit.

23. The disk loading apparatus as claimed in claim 19, wherein the shaft is formed on a front corner of the main body.

24. The disk loading apparatus as claimed in claim 19, wherein the tray includes a disk-seating portion formed in a bottom surface thereof.

25. The disk loading apparatus as claimed in claim 19, wherein the tray is in the shape of a sector.

26. The disk loading apparatus as claimed in claim 19, wherein the tray comprises:
a leading end guide formed to extend along a leading end of the tray; and
a trailing end guide formed to extend at a predetermined angle with respect to
a side edge of the tray.

27. The disk loading apparatus as claimed in claim 26, wherein the main body
includes first and second side guides formed at both inner sides thereof to extend from a
front end to a rear end of the main body.

28. A disk drive comprising the disk loading apparatus of claim 19.